Washington State On-Site Wastewater Rule Development Committee

June 18, 2003

SeaTac Occupational Skills Center
18010 8th Avenue South
SeaTac, Washington
(Meeting # 12 notes)

Representation	*Members / Alternates*	*2/13*	*3/28*	*5/22*	*7/17*	*9/19*	*10/24*	*12/12*	*1/23*	*3/13*	*4/24*	*5/6*	*6/18*
WA Assoc of Realtors	**Slough, Frederick**	+	+	+	+		+			+	+		
	Stout, Larry		+										+
Building Industry of WA	**Stanton E.C. (J. Slavik)**	+	+	+		+		+		+		+	+
	Kunkel, Jenn	+		+	+	+	+	+	+	+	+	+	+
On-Site Wastewater Designer	**Wecker, Steve**	+	+	+	+	+		+	+	+	+	+	+
	Lombardi, Pete	+					+	+		+			+
On-Site Wastewater Installer	**Stuth, Jr., Bill**	+	+	+	+	+	+	+	+	+	+	+	+
	Stonebridge, Jerry	+											
Certified Proprietary Device Specialist	**Garrison, Carl**	+	+	+	+	+	+	+	+	+	+	+	+
	Morris, Mike												
OSS Pumper/O&M Specialist	**Tacia, Reed**	+	+	+	+	+	+	+	+	+	+	+	
	Markle, Steve	+	+			+	+	+	+	+	+	+	
Proprietary Products At-Large	**Patterson, Jim**	+	+	+		+	+	+	+	+	+	+	+
Planning WA Assoc of Counties	**Shuttleworth, Mike**		+	+	+	+	+		+	+			
Local Health Jurisdictions (Westside-Urban)	**Deeter, Jerry**	+	+	+	+	+	+	+	+	+	+	+	+
	Starry, Art	+			+		+		+			+	
Local Health Jurisdictions (Westside-Rural)	**Higman, Keith**		+				+	+		+			
	Fay, Larry	+			+		+	+					
Local Health Jurisdictions (Eastside-Urban)	**Perkins, Bruce**		+	+					+	+	+	+	+
	Dawson, Rick	+	+	+	+	+	+		+	+	+	+	+
Local Health Jurisdictions (Eastside-Rural)	**Barry, Kevin**	+	+	+	+	+	+		+	+	+	+	+
	Wolpers, John												
Soil Scientist	**Cogger, Craig**						+	+	+	+			+
	Hermann, C			+									
Puget Sound Water Quality Action Team	**Hull, Terry**	+	+	+	+	+	+	+	+	+	+	+	+
Indian Health Services	**Dalton, Robin**	+	+	+	+	+							
WA Shellfish Industry	**Dewey, Bill**			+	+	+	+		+	+	+	+	+
	Taylor, Bill					+		+					
WA Dept of Ecology	**Kimsey, Melanie**		+		+	+	+		+		+	+	+
	Shaleen-Hansen, Mary	+					+						
WA Assoc of Water & Sewer Dist	**Hart, James**		+	+		+						+	+
	Wiggins, Margaret	+	+							+	+		
Consumer	**Smith, Denise**	+	+	+	+	+	+		+		+	+	+
	Salkind, Mark	+	+	+		+	+	+	+	+	+	+	+
WA Dept of Health	**Soltman, Mark**	+	+	+	+	+	+	+	+	+	+	+	+
People for Puget Sound	**Wishart, Bruce**												
WA Public Utilities Districts	**Kukuk, Ken**												
	Robertson, Robbie												
Professional Engineer	**Yuhl, Mike**	+	+	+		+	+	+		+	+	+	+
Tribal Government	**McMurtrie, Doug**	+	+	+	+	+	+		+	+	+	+	+

*+ Present at meeting, **Members** Alternates*

Onsite Rule Development Committee Meeting
June18, 2003

SeaTac Occupational Skills Center
18010 8th Avenue South
SeaTac, Washington 98148
(206) 433-2525

Time	Agenda Item	Outcome	Lead
9:00	Welcome		Maryanne Guichard
9:10	Agenda		Eric Svaren
9:15	Final approval process	Discussion/ Decision	Eric Svaren
9:45	O&M Concepts	Discussion/ Decision	Kelly Cooper
11:00	Product Registration	Discussion/ Decision	Kelly Cooper
12:00	Lunch		
12:30	TRC Issues Report on June 11& 12 meeting Treatment levels Disinfection Minimum land areas	Discussion/ Decision	Dave Lenning
2:55	Wrap-up		Eric Svaren
3:00	Adjourn		

ONSITE SEPTIC SYSTEM
RULE DEVELOPMENT COMMITTEE NOTES
Meeting 12
18 June 2003

Flip Chart Notes	Staff Notes
Agenda Welcome, agenda Final approval process O&M concepts Product registration Lunch TRC June 11/12 meeting Treatment levels Disinfection Minimum land area Wrap-up and adjourn	
O&M Notice of on-site system on title—Agreed Access ports—agreed 1. At-grade for non-conventional systems 2. For conventional (septic tank) systems, within 12" and marked	Handout: Overview of Proposed O&M (Attached) Amendments Design: RDC agreed to concept Conventional systems should be accessible and have manholes and risers to within 12 inches of grade. All others access at grade. Inspection: Agreed Notice on title to indicate septic system on property that needs to be maintained in accordance with applicable regulations. Owner responsibility: for systems with mechanical components the RDC modified the language to require annual inspection with O&M performed appropriately. Define inspect? RDC directed DOH to update the guidance document (handbook) on O & M for LHJs. Definition of O&M in the rule.
Process for revising language and approving package 1. Final draft out **Tuesday,** July 1 2. Proposals for changes due **Tuesday,** July 15 3. All proposals sent out to RDC for	(Attached) Days and dates in bold were incorrect in document handed out in the RDC meeting as well as the one e-mailed in advance (Final language revision and package approval process) These dates will change due to the RDC's

rating **Thursday,** July 17 4. Rankings due back Monday, July **21** 5. RDC meeting **Wednesday,** July 23	decision (made later in the meeting) to add another meeting. The final package will include all issues: those that the RDC reached consensus on and those not in agreement about. For the items not in agreement, discussion will be included for the SBOH on why agreement was not reached.
Treatment levels for registration purposes With Note 1 only, no note 2	(Handout - RDC June 18, 2003 attached) RDC asked for Treatment Levels table to be renamed "Treatment levels for registration purposes"
Options regarding minimum land area A. Extend this meeting (0 votes) B. Schedule another meetings (12 votes) C. Devote time on 7/23 (Struck out) D. Don't take up (Leave as is) (5 votes) E. Special committee do additional work and present to RDC 7/23 (0 votes) F. Don't take up and prepare Recommended Standards and Guidance (1 vote) G. Extend next meeting (1 vote)	RDC was asked how it wanted to address the remaining topic of minimum land area. Options were listed, and each member voted for their preference. The RDC decided to add another meeting to allow more time to take up the minimum land area.
(No meeting debriefing)	

Future meetings:

- July 23, 2003
- TBD in September or October 2003

The following four handouts were distributed at the meeting:

- Overview of Proposed O&M Amendments
- RDC June 18, 2003 Introductory Information and Recommendations
- On-Site Septic Rule Development Committee – Process for revising language and approving the package in July 23 RDC meeting
- Minimum Land Area

Overview of Proposed O&M Amendments
Presented to the RDC

June 18, 2003

Background: The RDC has reached consensus on the idea that proper operation and maintenance (O&M) of onsite systems is critical to ensure the protection of public health, most specifically for increasingly complex systems being placed on sensitive sites. It is also agreed that the topic of O&M is a multi-faceted issue that can be addressed through amendments to a number of sections in chapter 246-272 WAC. The following is an overview of suggested rule changes to address O&M. These concepts have been discussed by the RDC and further worked through the Language Committee.

Summary of proposals relating to O&M:

246-272A-0230 – Design – Specific design requirements have been added to facilitate O&M including:

- At-grade access and monitoring ports for any systems other than conventional/gravity flow.
- Specific requirements for alarms and warning systems for onsite systems with pumps.

Status – RDC agreement to concept/Language committee consensus on draft

RDC Decision: Leave language the way it is.

246-272A-0260 Inspection – It is proposed that the designer or installer file a copy of the "as-built" with the county auditor for new and modified systems. This will ensure that subsequent homeowners have a record of what their system consists of and where is it located. A copy of the homeowner operation and maintenance regulations will also be filed and provided to subsequent owners.

Status – Language Committee consensus

RDC Decision: Notice on title required? Unanimous
Document should indicate that a septic system is on the property and needs to be maintained in accordance with applicable regulations.

246-272A-0270 Operation and Maintenance – Owner responsibilities – The current rule requires septic tanks to be checked every three years. The proposal expands this requirement as follows:

- For conventional systems with gravity flow, homeowners must inspect their entire system every three years and perform appropriate maintenance.
- For systems with mechanical components, homeowners must inspect annually and perform appropriate maintenance**. (RDC modified this to read: For systems with mechanical components, homeowners must ensure that their system is inspected annually and that O&M is performed appropriately)**

Status – Language Committee consensus

RDC Decision: DOH should develop a guidance document on O&M for local health jurisdictions. The definition of what O&M is should be in the rule. (Vote all green cards with one yellow meaning they could live with the decision)

246-272A-0015 Local Management and Regulation- The current rule directs local health jurisdictions to develop and implement plans for operation and maintenance. The proposal provides more specific details and broadens the concept into an overall management plan that recognizes the need for local health jurisdictions to have a plan for the development of future onsite systems in addition to a plan for oversight of existing systems. The proposal directs local health jurisdictions to develop plans to:

- Maintain an inventory of OSS within their jurisdiction
- Identify areas and systems within their jurisdiction that may require increased design or treatment requirements as well as increased levels of operation and maintenance – with priority given to areas formerly known as "areas of special concern."
- Provide operation and maintenance information for all types of systems used within their jurisdiction.
- Maintain records of O&M activities as identified in their plan.
- Describe their capacity to assure O&M activities are adequate to address the needs of high-risk sites and systems.

Status – Language Committee work

246-272A-0120 & 1040 – Proprietary Treatment Product Registration and Proprietary Distribution Product Registration – **The manufacturer must provide specific written O&M materials to the local jurisdiction before a product is eligible to be permitted in a jurisdiction.**

Status – RDC agreement to concept

On-Site Septic Rule Development Committee

Final language revision and package approval process
28 May 2003

Process for submitting final revision proposals

1. Final language committee draft sent out by Tuesday, July 1.

2. RDC members review and submit any final proposed language changes (using the form listing the section title, page number, subsection number, proposed change, and brief rationale) by Tuesday, July 15.

3. Proposals are collected by staff and sent out to RDC members for rating by Thursday, July 17.

4. Rankings are due by Monday, July 21st.

5. RDC discusses proposals in rank order on Wednesday, July 23rd.

6. For each proposal, the RDC would move through the process described below.

7. Once all proposals have been considered or not later than 1:30 pm (whichever is earlier), the RDC begins voting on the final package.

Consideration of proposed language changes
(10:15 am – 1:30 pm, with lunch break)

Step	Allotted time	Elapsed time	
1	0:02	0:02	**Proposal.** Sponsor states their case for considering the change
2	0:10	0:12	**Discussion.** RDC discusses proposal
3	0:01	0:13	**Decide to decide (or discuss).** RDC votes on whether to vote on adoption or to discuss further. *Decision rule: Simple majority* **Green** vote=Proceed to vote **Red** vote=Continue discussion • If majority votes **Green**, vote up or down (Step 4) • If majority votes **Red,** discuss for another 10 minutes (Step 5) • If **No majority**, vote up or down (Step 5)
4	0:01	0:14	**Up or down vote.** RDC votes on proposal (and moves on to next proposal). *Decision rule: Two-thirds majority* **Green** vote = Adopt proposal **Red** vote = Reject proposal
5	0:10	0:24	**Extra discussion.** RDC discusses proposal for up to another 10 minutes
6	0:01	0:25	**Up or down vote.** RDC votes on proposal (and moves on to next proposal). *Decision rule: Two-thirds majority* **Green** vote = Adopt proposal **Red** vote = Reject proposal

Voting to adopt the final package
(1:30 – 3:00 pm)

Step	Allotted time	Elapsed time	
1	0:01	0:01	**Vote to accept package.** RDC votes on entire package of proposed language. *Decision rule: Consensus (single red card amounts to a veto)* **Green** vote = Adopt package **Red** vote = Reject proposal (veto); proceed to Step 2
2	0:05	0:06	**Explanation and editing.** Vetoes explain change(s) needed for them to support the final package.
3	0:01	0:07	**Vote on change.** Entire group votes on whether to make the change (adopt proposal) or not. *Decision rule: Consensus (single red card amounts to a veto)* **Green** vote = Adopt proposal **Red** vote = Reject proposal (veto); issue/section is moved from the consensus recommendations to the divided report, including a record of votes
4	0:01	0:08	**Vote to accept package.** RDC votes again on entire package—as changed in Step 3. *Decision rule: Consensus (single red card amounts to a veto)* **Green** vote = Adopt proposal **Red** vote = Reject proposal (veto), repeat Steps 2 -4

RDC Decision: The final report will include all issues: those that the RDC reached consensus on and those not in agreement about. For the items not in agreement, discussion will be included for the SBOH on why agreement was not reached.

The following outline guided the discussion. RDC decisions have been added in bold.

RDC
June 18, 2003

Introductory information

a. Combined TRC/RDC meeting – June 11-12, 2003
   1. 6 TRC members
   2. 11 RDC members/alternates each day
   3. Topics of discussion – treatment levels & minimum land areas
   4. Used majority opinion process for making decisions

b. June 18, 2003 meeting agenda
   1. Present majority opinions on issues
   2. Present reasons for minority opinions on issues
   3. Discussion
   4. RDC makes decisions

c. General information
   1. Treatment levels, soil type, soil depth (vertical separation), and minimum land area are among the many interrelated topics that are incorporated into the on-site rules.
   2. Combined meeting resulted in:
      a) Group decisions on treatment levels & their application
      b) No group decision on minimum land area
   3. Treatment levels and minimum land areas are interrelated:
      a) Both concern methods of dealing with nitrogen
         1) Treatment levels – reduction in concentration of nitrogen by removing it
         2) Minimum land area – reduction in concentration of nitrogen by diluting it
      b) Neither the current rule nor the TRC proposal accounts for this interrelationship

RECOMMENDATIONS

Treatment levels

a. Levels currently in use
   1. Treatment Standard 1 – 10 mg/L $CBOD_5$ & TSS, 200 FC/100 ml
   2. Treatment Standard 2 – 10 mg/L $CBOD_5$ & TSS, 800 FC/100 ml
   3. Residential septic tank effluent

Level	Parameters				
	$CBOD_5$ (mg/L)	TSS **(mg/L)**	FOG **(mg/L)**	FC **(#/100 ml)**	TN **(mg/L)**
A	10	10	---	200	---
B	15	15	---	1,000	---
C	25	30	---	50,000	---
E	200	80	20	---	---
N	---	---	---	---	20

b. Proposal from vote of RDC members/alternates

NOTES:

1) Values for $CBOD_5$ and TSS are 30-day averages; FC values are 30-day geometric means.

2) N to be applied where local designation processes have identified nitrogen to be a pollutant of concern (This note will be deleted)

RDC Decision to approve Table A without the second note above. Vote all green (yes) cards with a few yellow (meaning they could live with the decision)

c. Minority opinion comments
   1. The TRC made its recommendations based on an exhaustive literature. It's not clear why the group wants to change the values, especially those for fecal coliform.
   2. These recommendations reduced the flexibility available in the TRC recommendations.
   3. The CBOD and TSS standards should be left where they currently are – 10/10.

Application of treatment levels for conforming systems

a. Current
   1. No mention of ground/surface water resource areas is made
   2. Current Table IV

	Vertical Separation			
Soil Type	**< 1 foot**	**≥ 1 foot to < 2 feet**	**≥ 2 feet to < 3 feet**	**≥ 3 feet**
1A	Not allowed	Pressure Distribution (see note)[1 & 2]	Pressure Distribution (see note)[1]	Pressure Distribution (see note)[1]
2A	Not allowed	Pressure Distribution (see note)[1 & 2]	Pressure Distribution	Pressure Distribution
1B - 6	Not allowed	Pressure Distribution (see note)[1 & 2]	Pressure Distribution	Gravity Distribution

1 System meeting Treatment Standard 2 required.

2 Mound systems installed where the original, undisturbed, unsaturated soil depth is between 12 and 18 inches, require pretreatment by an intermittent sand filter.

b. Proposal
   1. There are areas that need extra protection beyond that provided in the current Table IV.
   2. Combine the TRC proposed for surface water resource areas with the new proposed Table 4 – results in new proposed Table IV below.

Treatment Level Required & Method of Distribution				
Vertical Separation	*Soil Type*			
	1	**2**	**3 — 4**	**5 — 6**
≥12" <18"	A - P	B - P	B - P	B - P
≥18" <24"	B - P	B - P	B - P	B - P
≥24" <36"	B - P	C - P	E - P	E - P
≥36" < 60"	B - P	E - P	E - G	E - G
≥60"	C - P	E - G	E - G	E - G

KEY: ***First letter in each cell is required treatment level***
Second letter in each cell is required method of distribution: P – Pressure distribution with time-dosing, G - gravity

   3. Place the proposed table for ground water resource areas and accompanying information in guidance document. Place into rule the direction to the health officer to address other areas of higher risk, such as ground water resource areas.

RDC Decision: After changing the method of distribution in for Soil Type 2 between ≥ 36 inches ≤ 60 inches from Pressure to Gravity the Proposed Table IV was approved (all voted green or yellow).

c. Minority opinion comments
   1. Combining the two tables reduces flexibility

Application of treatment levels for repairs that can't meet vertical or horizontal separations

a. Current Table VI

Requirements for Repair or Replacement of Disposal Components Not Meeting Vertical and Horizontal Separations [1,2]

Vertical Separation (in feet)	Horizontal Separation (in Feet[3])		
	< 25	25 - 50	> 50 - ≤100
<1	Treatment Standard 1	Treatment Standard 1	Treatment Standard 2[4]
1-2	Treatment Standard 1	Treatment Standard 2[4]	Pressure Distribution
>2	Treatment Standard 2[4]	Pressure Distribution	Pressure Distribution

[1] *The treatment standards refer to effluent quality before discharge to unsaturated, subsurface soil.*

[2] *The local health officer may permit ASTM C-33 sand to be used as fill to prevent direct discharge of treated effluent to groundwater, surface water, or upon the surface of the ground.*

[3] *The horizontal separation indicated is the distance between the disposal component and the surface water, well, or spring. If the disposal component is up-gradient of a surface water, well, or spring to be used as a potable water source, the next higher standard level of treatment shall apply unless treatment standard 1 is already being met.*

[4] *Mound systems are not allowed to meet Treatment Standard 2.*

b. Proposed Table VI

Horizontal Separation →→→→	< 25 feet				25 < 50 feet				50 < 100 feet				> 100 feet			
Vertical Separation	Soil Type				Soil Type				Soil Type				Soil Type			
	1	2	3 - 4	5 - 6	1	2	3 - 4	5 - 6	1	2	3 - 4	5 - 6	1	2	3 - 4	5 - 6
< 12"	A	A	A	A	A	A	A	A	A	A	B	B	B	B	B	B
≥12" <18"	A	A	A	A	A	B	B	B	A	B	B	B	Conforming Systems			
≥18" <24"	A	A	A	A	A	B	B	B	A	B	C	C				
≥24" <36"	A	B	B	B	B	C	C	C	B	C	C	C				
≥36"	A	B	B	B	B	C	C	C	B	C	E	E				

NOTE: Pressure distribution with time-dosing required in all cases

c. Comments (not minority since there were no "No" votes)

1. The table is confusing.
2. Need time to understand how changes compare to existing rule and what this means to existing technologies.
3. Most members agreed that the table provided more flexibility and would be more helpful for local jurisdictions in determining the level of treatment necessary at varying setbacks.

RDC Decision: The proposed Table VI was approved with all voting green (yes) or yellow (can live with it).

Use of disinfection, such as chlorination or ultraviolet radiation, to meet fecal coliform values in treatment levels – PROPOSAL

a. Any disinfection unit must meet nationally acceptable protocol in order to be used – either as an individual unit or as part of a treatment train.
b. Disinfection shall not be used in the following situations:
    1. Type 1 soils
    2. Repairs with less than 12 inches vertical separation
    3. To meet the fecal coliform values for treatment level C. No technology can be used to meet treatment level A that incorporates disinfection such as chlorination or ultraviolet radiation.

RDC Decision: The RDC voted to accept the above proposal on disinfection (Mostly green with some yellow cards).

Minimum land area – GROUP DECISION NOT REACHED

a. Current requirements
   1. Method 1 – minimum land areas per unit volume – existing Table VII

Type of Water Supply	Soil Type (defined by section 11001 of this chapter)					
	1A, 1B	2A, 2B	3	4	5	6
Public	0.5 acre[1]	12,500 sq. ft.	15,000 sq. ft.	18,000 sq. ft.	20,000 sq. ft.	22,000 sq. ft.
	2.5 acre[2]					
Individual, on each lot	1.0 acre[1]	1 acre	1 acre	1 acre	2 acres	2 acres
	2.5 acres[2]					

[1] Due to the highly permeable nature of Soil Type 1A, only alternative systems which meet or exceed Treatment Standard 2 can be installed.

[2] A conventional gravity system in Soil Type 1A is only allowed if it is in compliance with all conditions listed under WAC 246-272-11501(2)(h). One of these limiting conditions is a 2.5 acre minimum lot size.

   2. Method 2 – alternate method of determining minimum land areas requiring report containing technical justification

b. TRC Recommendations
   1. Revised Table VII

Type of Water Supply	Soil Type (defined by section 11001 of this chapter)					
	1	2	3	4	5	6
Public	0.5 acre	0.5 acre	0.5 acre	0.5 acre	0.5 acre	0.5 acre
	2.5 acre					
Individual, on each lot	1.0 acre	1 acre	1 acre	1 acre	1 acre	1 acre
	2.5 acres					

   2. Delete Method 2

   3. Where gross densities for existing or proposed development is less than 1 acre, nitrogen must be addressed.

The RDC voted to hold another meeting to discuss Minimum Land Area.